Gln His Leu Lys Arg Val Gln Leu Arg Glu Leu Ser Glu Ala Glu Val 625 630 635 640

Arg Gln His Arg Glu Ala Arg Pro Ala Leu Leu Thr Ser Arg Leu Arg 645 650 655

Phe Ile Pro Lys Pro Asp Gly Leu Arg Pro Ile Val Asn Met Asp Tyr 660 665 670

Val Val Gly Ala Arg Thr Phe Arg Arg Glu Lys Arg Ala Glu Arg Leu 675 680 685

Thr Ser Arg Val Lys Ala Leu Phe Ser Val Leu Asn Tyr Glu Arg Ala 690 695 700

Arg Arg Pro Gly Leu Leu Gly Ala Ser Val Leu Gly Leu Asp Asp Ile 705 710 715 720

His Arg Ala Trp Arg Thr Phe Val Leu Arg Val Arg Ala Gln Asp Pro 725 730 735

Pro Pro Glu Leu Tyr Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp 740 745 750

Thr Ile Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys 755 760 765

Pro Gln Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala
770 780

Ala His Gly His Val Arg Lys Ala Phe Lys Ser His Val Leu Arg Pro
785 790 795 800

Val Pro Gly Asp Pro Ala Gly Leu His Pro Leu His Ala Ala Leu Gln 805 810 815

Pro Val Leu Arg Arg His Gly Glu Gln Ala Val Cys Gly Asp Ser Ala 820 825 830

Gly Arg Ala Ala Pro Ala Phe Gly Gly 835 840

<210> 61

<211> 756

<212> PRT

<213> Homo sapiens

<220>

<223> Truncated Protein 2 (ver.2); encoded by SEQ ID
 NO:59 with Intron Y ORF2 after the termination
 codon

<400> 61

Gly Arg Pro Gly Gly Thr Ser Asp Met Arg Arg Ala Ala Gln Ala Thr

1 5 10 15

Gln Gly Ala Ser Pro Ala Gly Ser Cys Leu Lys Glu Leu Val Ala Arg



Thr Phe Val Leu Arg Val Arg Ala Gln Asp Pro Pro Pro Glu Leu Tyr 645 650 655

Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp Thr Ile Pro Gln Asp 660 665 670

Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys Pro Gln Asn Thr Tyr 675 680 685

Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala Ala His Gly His Val 690 695 700

Arg Lys Ala Phe Lys Ser His Val Leu Arg Pro Val Pro Gly Asp Pro 705 710 715 720

Ala Gly Leu His Pro Leu His Ala Ala Leu Gln Pro Val Leu Arg Arg 725 730 735

His Gly Glu Gln Ala Val Cys Gly Asp Ser Ala Gly Arg Ala Ala Pro
740 745 750

Ala Phe Gly Gly 755

<210> 62

<211> 841

<212> PRT

<213> Homo sapiens

<220>

<223> Truncated Protein 2 (ver.2); encoded by SEQ ID NO:
 59 with Intron Y ORF3

<400> 62

Met Pro Arg Ala Pro Arg Cys Arg Ala Val Arg Ser Leu Leu Arg Ser 1 5 10 15

His Tyr Arg Glu Val Leu Pro Leu Ala Thr Phe Val Arg Arg Leu Gly 20 25 30

Pro Gln Gly Trp Arg Leu Val Gln Arg Gly Asp Pro Ala Ala Phe Arg 35 40 45

Ala Leu Val Ala Gln Cys Leu Val Cys Val Pro Trp Asp Ala Arg Pro 50 55 60

Pro Pro Ala Ala Pro Ser Phe Arg Gln Val Pro Pro Arg Gly Arg Arg
65 70 75 80

Pro Ala Gly Val Glu Gly Gly Arg Gly Glu Pro Ala Thr Cys Gly Glu
85 90 95

Gln Arg Arg Leu Arg Ala Leu Pro Pro Gln Val Ser Cys Leu Lys 100 105 110

Glu Leu Val Ala Arg Val Leu Gln Arg Leu Cys Glu Arg Gly Ala Lys 115 120 125



740 745 750

Thr Ile Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys
755 760 765

Pro Gln Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala 770 775 780

Ala His Gly His Val Arg Lys Ala Phe Lys Ser His Val Leu Arg Pro 785 790 795 800

Val Pro Gly Asp Pro Ala Gly Leu His Pro Leu His Ala Ala Leu Gln 805 810 815

Pro Val Leu Arg Arg His Gly Glu Gln Ala Val Cys Gly Asp Ser Ala 820 825 830

Gly Arg Ala Ala Pro Ala Phe Gly Gly 835 840

<210> 63

<211> 3500

<212> DNA

<213> Homo sapiens

<220>

<223> Reference Protein (ver.2); with Introns Y, Alpha and Beta

<400> 63

atgreeque etceceque eqaqueque egetecetge tgegeageca etacegegag 60 qtqctqccqc tqqccacqtt cqtqcqqcqc ctqqqqcccc agggctggcg gctggtgcag 120 cgcggggacc cggcggcttt ccgcgcgctg gtggcccagt gcctggtgtg cgtgccctgg 180 gacgcacggc cgccccccgc cgccccctcc ttccgccagg tgggcctccc cggggtcggc 240 gtccggctgg ggttgagggc ggccgggggg aaccagcgac atgcggagag cagcgcaggc 300 gactcagggc gcttcccccg caggtgtcct gcctgaagga gctggtggcc cgagtgctgc 360 agaggctgtg cgagcgcggc gcgaagaacg tgctggcctt cggcttcgcg ctgctggacg 420 gggcccgcgg gggcccccc gaggccttca ccaccagcgt gcgcagctac ctgcccaaca 480 cggtgaccga cgcactgcgg gggagcgggg cgtgggggct gctgttgcgc cgcgtgggcg 540 acgacgtgct ggttcacctg ctggcacgct gcgcgctctt tgtgctggtg gctcccagct 600 gegeetacea ggtgtgeggg cegeegetgt accagetegg egetgeeact caggeeegge 660 ccccgccaca cgctagtgga ccccgaaggc gtctgggatg cgaacgggcc tggaaccata 720 gegteaggga ggeeggggte eccetgggee tgeeageeee gggtgegagg aggegegggg 780 gcagtgccag ccgaagtctg ccgttgccca agaggcccag gcgtggcgct gcccctgagc 840 cggagcggac gcccgttggg caggggtcct gggcccaccc gggcaggacg cgtggaccga 900 gtgaccgtgg tttctgtgtg gtgtcacctg ccagacccgc cgaagaagcc acctctttgg 960 agggtgcgct ctctggcacg cgccactccc acccatccgt gggccgccag caccacgcgg 1020 geoceccate cacategegg ccaccaegte cetgggacae geettgteec ceggtgtacg 1080 ccgagaccaa gcacttcctc tactcctcag gcgacaagga gcagctgcgg ccctccttcc 1140 tactcagete tetgaggeee ageetgactg gegeteggag getegtggag accatettte 1200 tgggttccag gccctggatg ccagggactc cccgcaggtt gccccgcctg ccccagcgct 1260 actggcaaat geggeeetg tttetggage tgettgggaa ceaegegeag tgeeettaeg 1320 gggtgctcct caagacgcac tgcccgctgc gagctgcggt caccccagca gccggtgtct 1380 gtgcccggga gaagccccag ggctctgtgg cggcccccga ggaggaggac acagaccccc 1440 gtcgcctggt gcagctgctc cgccagcaca gcagcccctg gcaggtgtac ggcttcgtgc 1500 gggcctgcct gcgccggctg gtgcccccag gcctctgggg ctccaggcac aacgaacgcc 1560 gcttcctcag gaacaccaag aagttcatct ccctggggaa gcatgccaag ctctcgctgc 1620



Glu Leu Tyr Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp Thr Ile 720

Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys Pro Gln 735

Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala Ala His 755

Gly Asp Pro Ala Gly Leu His Pro Leu His Ala Val Cys Gly Asp Ser Ala Gln Pro Val Reg Arg Arg Arg Arg Arg Gly Glu Gln Ala Val Cys Gly Asp Ser Ala Gly Arg 800

Ala Ala Pro Ala Phe Gly Gly 805

<210> 40 <211> 3396 <212> DNA <213> Homo sapiens

<223> Reference Telomerase; with Intron Alpha and Beta

<400> 40 atgccgcgcg ctccccgctg ccgagccgtg cgctccctgc tgcgcagcca ctaccgcgag 60 gtgctgccgc tggccacgtt cgtgcggcgc ctggggcccc agggctggcg gctggtgcag 120 cgcggggacc cggcggcttt ccgcgcgctg gtggcccagt gcctggtgtg cgtgccctgg 180 gacgcacggc cgccccccgc cgccccctcc ttccgccagg tgtcctgcct gaaggagctg 240 gtggcccgag tgctgcagag gctgtgcgag cgcggcgca agaacgtgct ggccttcggc 300 ttegegetge tggaegggge eegeggggge eeceeegagg eetteaceae eagegtgege 360 agctacctgc ccaacacggt gaccgacgca ctgcggggga gcggggggtg ggggctgctg 420 ttgcgccgcg tgggcgacga cgtgctggtt cacctgctgg cacgctgcgc gctctttgtg 480 ctggtggctc ccagctgcgc ctaccaggtg tgcgggccgc cgctgtacca gctcggcgct 540 gccactcagg cccggccccc gccacacgct agtggacccc gaaggcgtct gggatgcgaa 600 egggeetgga accatagegt eagggaggee ggggteecee tgggeetgee ageeeegggt 660 qcqaqqaqqc gcqgqqqcag tgccaqccga agtctgccgt tgcccaagag gcccaggcgt 720 qqcqctqccc ctqaqccqqa qcqqacqccc qttgggcagg ggtcctgggc ccacccgggc 780 aggacgcqtq qaccqaqtqa ccqtqqtttc tqtqtqqtqt cacctqccaq acccqccqaa 840 gaagecacet etttggaggg tgegetetet ggeaegegee aeteceacee atcegtggge 900 egecageace aegegggece eccatecaca tegeggecae caegteeetg ggacaegeet 960 tgtcccccgg tgtacgccga gaccaagcac ttcctctact cctcaggcga caaggagcag 1020 etgeggeeet cetteetaet eagetetetg aggeeeagee tgaetggege teggaggete 1080 gtggagacca tctttctggg ttccaggccc tggatgccag ggactccccg caggttgccc 1140 cgcctgcccc agcgctactg gcaaatgcgg cccctgtttc tggagctgct tgggaaccac 1200 gegeagtgee ectaeggggt geteeteaag aegeactgee egetgegage tgeggteace 1260 ccagcagccg gtgtctgtgc ccgggagaag ccccagggct ctgtggcggc ccccgaggag 1320 gaggacacag accccqtcg cctggtgcag ctgctccgcc agcacagcag cccctggcag 1380 gtgtacggct tcgtgcgggc ctgcctgcgc cggctggtgc ccccaggcct ctggggctcc 1440 aggcacaacg aacgccgctt cctcaggaac accaagaagt tcatctccct ggggaagcat 1500 gccaagctct cgctgcagga gctgacgtgg aagatgagcg tgcggggctg cgcttggctg 1560

